INTERNATIONAL BULLETIN OF PLANT PROTECTION

DISCOVERIES AND CURRENT EVENTS *

Belgian Congo: A New Disease of Sisal (1).

In the Belgian Congo (Inkisi) sisal (*Agave rigida* var. *sisalana*) is affected with a disease which has not hitherto been reported, unless possibly in the Philippines, where in 1927 the leaves of sisal were attacked by 'mosaic' or yellow spots the cause of which was unknown.

The disease is due to a filterable virus. It affects chiefly the young leaves of plants from six months to three years old. It is characterised to begin with by the appearance of pale green transparent spots, which later turn yellow with brownish-red margins; at this stage the fibre is useless and the leaf valueless on account of the number of spots.

The condition which predisposes plants to this disease is the sterile character of the soil in the region where it has appeared.

The only method of control which has been proposed up to the present is the systematic removal of all leaves showing the slightest symptom and the collection of suckers or bulbils which appear immune so as to establish a resistant variety.

United States of America: Plant Disease Survey Notes (2).

Tomato die-back or tip blight. In the last few years has been severe in certain coastal sections of California with result that tomato growing in these regions has been practically abandoned. The symptoms are somewhat like "streak" or "stripe" as described from England and Eastern United States, and the "spotted wilt" of Australia. It is not usually of any importance in inland, drier, and warmer areas of California but this year many cases have occurred there. One field showed 45 to 50 per cent diseased plants, and most fields averaged about 10 per cent. (BEECHER and SHAPOVALOV).

Celery yellows. This disease, caused by the aster yellows virus and transmitted by the leaf hopper *Cicadula sexnotata*, is of some importance in California. The leaf hopper has been known there for a long time but the yellows virus that it transmits appears to be a recent introduction. What seems to be the same disease was reported October 8, 1929 from the State of Maine.

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* In this, as in the two next chapters, the countries are arranged in French alphabetical order.

(1) Communication from the official correspondent of the Institute, Dr. P. STANER, Director of the Mycological Laboratory, Eala, Belgian Congo.

(2) Communication from the official correspondent of the Institute, Dr. R. J. HASKELL, Pathologist in Charge, Plant Disease Survey, Bureau of Plant Industry, United States Department of Agriculture, Washington, D. C.

Salsify yellows. The aster yellows virus, transmitted by the leaf hopper *Cicadula sexnotata*, has been found to be the cause of some loss to salsify in Maryland and Pennsylvania. The disease occurred in all of seven patches examined in amounts ranging from 2 to 5 per cent. Nothing is being done to control it.

Rust on Swiss chard. A specimen of *Uromyces betæ* on Swiss chard collected at Newport, Oregon, September 25, 1929 has been received. This is the second time the disease has been reported to the Survey from that state it having been collected in 1924 on chard and also on garden beets at the same place. Besides Oregon, the Survey has reports of its occurrence on chard on file from California and on sugar beets and garden beets from California, Colorado, and Kansas. The disease is rather frequently reported from California but seems to be of minor importance.

Stem nematode (*Tylenchus dipsaci* Kuhn) of *Phlox* spp. First found in the United States in 1923 in New Jersey. In 1928 its occurrence was noted in Connecticut. In 1929 its presence was reported from these two states and also New York. In each instance the disease was destructive and involved from several to a hundred or more plants. European occurrence as reported to us is Belgium, Holland, Switzerland, and Germany. Lately the notes about this pest in central Europe have been becoming increasingly frequent.

Powdery mildew of crapemyrtle (*Lagerstroemia* spp.) caused by *Uncinula australiana* McAlp. Found first in the United States in Texas in 1924. Since then its occurrence has been reported in Alabama, Florida, Georgia, Louisiana, Mississippi, South Carolina, and Tennessee. A recent finding of this disease in the District of Columbia extends its range from the Southern into the Middle Atlantic States. Other countries of known occurrence are Australia and Japan.

Rust on *Plumeria acutifolia*. A specimen of a rust which was defoliating a frangipani tree (*Plumeria acutifolia*) at Coconut Grove, Florida, has been identified as *Coleosporium domingense* (Berk.) Arth. (*C. plumeriae* Pat.). This seems to be the first report of this rust in the United States. It is known to occur on species of *Plumeria* in Santo Domingo, Cuba, Porto Rico, Bahamas, Moria Island, Guadeloupe, Guatemala, Peru, Panama, and Mexico.

United States of America : Outstanding Entomological Features (1).

Very serious depredations by corn root worms (*Diabrotica duodecim-punctata* Fab. and *D. longicornis* Say) have been reported from Iowa and Nebraska. Large patches of corn are completely killed out in many districts and much corn was lodged on account of the destruction of the roots.

The velvet bean caterpillar (*Anticarsia gemmatilis* Hbn.) is practically ruining the soy-bean crop in southern Louisiana and along the eastern coast of Texas. The strange feature of this outbreak is the fact that velvet beans and cowpeas adjacent to ruined fields of soy beans are practically undamaged.

Cowpeas in the coastal plains district of the Carolinas are so seriously infected by the cowpea curculio (*Chalcodermus aeneus* Boh.) that many growers are not recovering their seed.

(1) Communication from the official correspondent of the Institute, Mr. J. A. Hyslop, Senior Entomologist in Charge, Insect Pest Survey, Bureau of Entomology, United States Department of Agriculture, Washington, D. C.

During August 1929 the alfalfa weevil (*Phytonomus posticus* Gyll.) was discovered in the vicinity of Medford, Oregon. This appears to be a commercial jump as the nearest known infestation is 200 miles distant in eastern Oregon. This insect was also found for the first time in Alpine County, California, this being an extension of the Carson Valley, Nevada, area.

Owing to a partial third brood of the codling moth (*Carpocapsa pomonella* L.) developing in the Middle Atlantic, East Central, and West Central States, late injury by the worms is very noticeable, even in well sprayed orchards. Serious conditions have also been reported from Nevada and Washington.

More damage by the apple maggot (*Rhagoletis pomonella* Walsh) than usual is being observed in the New England States.

The apple fruit worm (*Argyresthia conjugella* Zell.) has been observed for the first time in the Montesano section of Washington.

A very interesting case of the complete control of an insect pest by its natural enemies is reported from Ohio, where the apple flea weevil (*Orchestes pallicornis* Say) has been practically eliminated this year by its hymenopterous parasites.

The oriental fruit moth (*Laspeyresia molesta* Busck) is recorded for the first time from the northern end of Indiana and also from Amherst, Mass., and is quite generally reported from practically the entire infested region.

The grape berry moth (*Polychrosis viteana* Clem.) has very materially increased in abundance in the Lake Shore district of Ohio and over practically the entire State of West Virginia.

The fall webworm (*Hyphantria cunea* Drury) is unusually abundant throughout the South Atlantic and Gulf Coast region extending up the Mississippi Valley into Missouri.

The European weevil (*Brachyrhinus cribricollis* Gyll.) has been discovered on citrus and privet in Los Angeles County, California.

The citrus whitefly (*Dialeurodes citri* Ashm.) is being reported as very abundant from Florida and the Gulf Coast section.

Very serious damage by the garden webworm (*Loxostege similalis* Guen.) to alfalfa is reported from Iowa and Nebraska.

The curculionid beetle (*Tyloderma morbillosa* Lec.) is recorded for the first time as a strawberry pest in Washington.

The pickle worm (*Diaphania nitidalis* Stoll) appears to be much more serious than usual in the Northern part of its range, reports coming from the East Central and West Central States. The insect is recorded for the first time from Nebraska.

Two heretofore unrecorded species of springtails are doing commercial damage to mushrooms in Minnesota and Missouri. The species in Minnesota belongs to the genus *Achorutes* and the species in Missouri to the genus *Schottella*.

A very interesting outbreak of the great basin caterpillar (*Malacosoma fragilis* Stretch.) took place near Mount Shasta, California. The worms were so numerous that they prevented railroad trains from making the grades. Special equipment was required on the locomotives to meet the emergency, this consisted of steam jets in front of the wheels to blow the worms from the tracks.

The satin moth (*Stilpnotia salicis* L.) has been recorded for the first time in woodland districts in New England. It has been known for several years on shade trees.

The hemlock spanworm (*Ellopia fiscellaria* Guen.) has killed practically all of the hemlock in the resort region of Michigan and is now seriously damaging hardwood.

A very heavy infestation by the two-lined prominent (*Hemerocampa bilineata* Pack.) attacking beech and oak is reported from Michigan.

A considerable part of the White Mountain district of New Hampshire, a large part of Vermont, and Maine, and parts of Massachusetts seem to be well infested by the birch leaf-mining sawfly (*Phyllotoma nemorata* Fallen).

Italy: Two New Affections of the Vine and some Pests of Rice and Forest Trees (1).

At Genzano, Ariccia and Genazzano during June 1929 two new affections of the vine were observed.

One takes the form of a malformation of the spring shoots, the leaves of which are deformed, arrested in their development and have abnormal outgrowths on their under surfaces. The bunches are little developed, often abortive and the production of fruit suffers.

The other, observed only at Genazzano, affects the extremity of the vine branches, which become stunted after flowering ; outgrowths frequently occur on the internodes. The terminal leaves shrivel up and grow no further and the flowers do not set.

These two affections which have yet to be investigated do not seem to be of fungal or bacterial origin. The first is possibly caused by *Acaridae* and the other probably by the punctures and lesions of *Thripidae*.

The rice fields in the Pontine Marshes have been seriously damaged by the aquatic larvae of a Dipterous insect of the genus *Chironomus* which feeds on the young shoots. Sowing had to be repeated a number of times. Satisfactory results were obtained by draining the fields.

A serious invasion of *Euproctis chrysorrhoea* L. was reported in Central Italy, particularly on oaks and chestnuts. Elms in the province of Rome were defoliated in many cases by *E. chrysorrhoea* and by *Galerucella luteola* Müll. In the district round Viterbo the foliage in various vineyards was damaged last spring by *E. chrysorrhoea*.

VARIOUS QUESTIONS

Data and Information on Damage caused to Cultivated Crops by the Cold of the Winter 1928-1929 *

Egypt (2). — At Giza the mean minimum temperature for January 1929 was 4.9° C and the absolute minimum temperature — 0.6° C.

Frost affected the tips of the leaves of practically all wheats to a varying extent, the tips turning brown. The Baladi wheats were as a rule considerably less affected than the Hindi varieties. All varieties of castor oil both Egyptian

(1) Communication from the Royal Station of Plant Pathology at Rome, official correspondent of the Institute.

* Continued from No. 11.

(2) Communication from the Director of Plant Protection Section, Ministry of Agriculture, Giza, Egypt, to the International Institute of Agriculture.

and Indian (imported recently from India) were badly affected but in varying degree. In most cases a large percentage of plants had all their leaves withered and killed (the plants were 2 ½ to 3 month old) some plants died but usually the plants recovered, however, they were again caught by the 2nd frost (some 2 weeks or 3 later), again some plants died but the great majority recovered later. On other crops (beans, lentils, chick beans, fenugreek) damage was not observed, there may have been a slight damage but nothing obvious and no special observations were made.

Indochina (1). — The exceptional cold reported from various countries during the 1928-29 winter has not been felt in Indochina. The minimum temperatures recorded were not abnormally lower than in other years.

No indications of crop damage due to cold have been noted and no special observations have been made on the subject.

'Iraq (2). — The winter of 1928-1929 was not marked in this country by any extreme cold.

Palestine (3). — The winter remained mild and warm until towards the end of December 1928 and the cold spell began in mid-January 1929. The mean minimum temperatures during January, February, and March 1929 at Tel Aviv were respectively 7.5°, 7.9° and 9.4°C., and the average temperatures during the same period were 12.2°, 13° and 14.6°C. These figures do not deviate far from the normal average. On the other hand nearly the whole of the usual quantity of rain fell during this period, which caused a certain amount of damage to crops, particularly to market gardens in Emek Jesreel. The cold alone cannot be said to have caused any damage.

Persia (4). — In Persia the winter of 1928-29 has differed from that over the whole of Europe in being milder than usual, and consequently no appreciable damage has been caused to crops. The only noteworthy fact is that by reason of the relative mildness of the weather there was only one snowfall of any size at Teheran, and consequently a small portion of the crops suffered slightly from lack of covering. The result of this small amount of snow and the dryness of the year is that there is little water available for irrigation and for the autumn sowings, and it is highly probably that the latter will not reach the level of last year.

In other provinces the situation is normal.

Poland (5). — The winter of 1928-1929 was notable in Poland not only on account of the extremely low temperatures but also for the length of its duration and for the extreme variability in the temperature which occurred, chiefly in February. According to the records of the State Meteorological Institute the minima registered in the South and North-East were below —40°C. and even reached —43°C.

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(1) Communication from the Inspector General of Agriculture, Stock-raising and Forests, General Government of Indochina, Hanoi, to the International Institute of Agriculture.

(2) Communication from the official correspondent of the Institute, Mr. J. F. WEBSTER, B. A., Inspector-General of Agriculture, Baghdad, 'Iraq.

(3) Communication from the official correspondent of the Institute, Dr. F. S. BODENHEIMER, Hebrew University, Jerusalem, Palestine.

(4) Communication from the official correspondent of the Institute, Mr. Ahmed H. ADLE, Department of Agriculture, Teheran, Persia.

(5) Communication from the official correspondent of the Institute, Dr. L. GARBOWSKI, Chef de la Section des maladies des plantes de l'Institut agronomique de l'Etat, Bydgoszcz, Poland.

The mean temperatures for the months of December 1928, January, February, March and April 1929 were throughout Poland lower than the normal registered since 1886. The mean temperature was 12.9°C. below the usual average. Variations of as much as 30°C. were sometimes recorded from one day to the next ; *e. g.*, in the district of Miechów near Cracovia the records were as follows :— Feb. 3 —40°C., Feb. 4 —12°, Feb. 5 —10°, Feb. 6 —40°, Feb. 7 —14°, Feb. 8 —10°, Feb. 9 —40°, Feb. 14 —5°. In certain places in April the minimum was still as low as —23°C.

The ground being frozen to a depth of 2 m. pit and cellar stored potatoes were frosted in many places. The winter cereals were affected only in places such as hills where the overlying snow had disappeared. Damage to winter wheat was reported in the ' voïvodats ' of Posen, Lodz, Lublin and in East Poland. The damage, which did not for the most part exceed 5 to 25 %, in the case of the Sobótka variety of Stiegler was as great as 90 % in the Lublin district. It was shown that the Square-head variety was more susceptible to frost than the loose-eared wheats. Rye was comparatively little damaged, and only where the snow covering was too thin. Winter barley proved less resistant and was seriously damaged only in the ' voïvodats' of Lublin and Tarnopol. Winter turnips were badly damaged, 75 % in the ' voïvodat ' of Lublin. French lucerne suffered more (30 % against 10 %) than the Kossack Alfalfa from America ; the American lucerne of Grimm was the most resistant.

Fruit orchards were seriously damaged. Certain trees of southern origin, such as the apricot, peach and walnut were killed to an extent of 80 to 95 %. Old trees were less resistant than young ones. It appears as if after this disastrous winter there will not be a walnut tree of over 100 years of age in all Poland. Next in order of susceptibility come the sour cherries, sweet cherries, plums and pears. The extent of damage though varied according to the variety, region, position of the orchard, soil conditions, etc. It is estimated, for example, that the damage to pear trees in West Poland is 60 to 70 %, to plums 50 %, to cherries 20 %, while in the central and eastern districts 90 % of the plum trees were damaged, 80 % of the sweet and sour cherries and 60 % of the pears. The average damage to apple trees throughout Poland was 50 %.

Vines, which are grown in all large Polish fruit gardens, as much in the south as in the western and central parts, were relatively little affected, which confirms the opinion expressed in this *Bulletin* (Year III, 1929, No. 8, p. 120) by the Royal Station of Plant Pathology at Rome with regard to the resistance of vines to frost.

The following observations were made with regard to the resistance to cold of different varieties of fruit trees :—

Sensitive apples : Coulon Pippin, Cox's Orange Pippin, Baumann Pippin, Landsberg Pippin, Queen of the Pippins, Belle de Boskoop, Pomme Framboise ;

Resistant apples : Antonówka, Hawthorden, Cassel Pippin, Pomme de Gravenstein ;

Sensitive pears : Clapp's Favourite, Doyenne de Mérode, Luise Bonne d'Avranches, Souvenir du Congrès, Bon Chrétien, Williams ;

Resistant pears : Princesse Marianne and certain local varieties (Ramaranczówka, Cukrówka) ;

Sensitive plums : Reine Claude d'Althan, Reine Claude d'Oullins.

Less sensitive plums : *Prunus domestica*, Washington.

Sensitive cherries : Early Royal, Reine Hortense, Late Black Bigarreau, Flamantin.

The bush fruits which suffered most were the raspberries, with the exception of the variety Marlborough which was very resistant.

Generally speaking nearly half the fruit trees in the orchards and nurseries of

Poland were killed, which represents, according to an estimate made by Prof. E. JANKOWSKI, an approximate loss of 300,000,000 zloty (= $ 34,000,000).

Frost damage to trees was apparent in the withering of particularly the lower branches, in longitudinal splits on the trunk, in scorching and the partial detachment of the bark. It was principally the late frosts during March and April which were very injurious to trees. Orchards on poor sandy soil suffered more than those in better conditions. Over much moisture in the soil increased the adverse effects. The part of the trees exposed to the south was often the most damaged. In mountainous places the trees exposed to the sun suffered most and in the plains those along the rivers. Many ornamental trees and shrubs were also killed in town and country parks. They were principally species originating from hotter climates, *e. g.*, *Buxus sempervirens*, *Cydonia japonica*, various species of *Crataegus*, *Spiraea*, *Syringa*, *Lonicera*, *Hedera Helix*, *Cytisus Laburnum*, *Ligustrum vulgare*, *Wistaria sinensis*, *Tecoma radicans*, etc. Forsythias lost their flower buds on the upper branches and only the lower branches which had been covered in snow flowered. Although *Taxus baccata* and various species of *Chamecyparis* and of *Thuya* were badly damaged, *Tsuga canadensis*, *Pseudotsuga Douglasii*, *Abies concolor violacea*, *Liriodendron tulipifera*, *Morus alba*, *Caragana arborescens* and certain species of *Magnolia* and *Rhododendron* showed a considerable resistance. Some *Robinia Pseudacacia* trees in the park of the Agronomic Institute at Bydgoszcz flowered particularly profusely after the terrible winter. Old trees of this species elsewhere were considerably damaged.

To complete the list the damage to medicinal crop plants in Central Poland, *e. g.*, thyme and sage, should be mentioned.

Southern Rhodesia (1). — Owing to the absence of rain during our winter months, no crops of importance are grown here so that no information can be furnished on damage caused by cold.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Cuba. — Presidential Decree No. 997 of 12 June 1929 bears modifications of Presidential Decree No. 740 of 10 May 1929. (See this *Bulletin*, Year III, 1929, No. 8, pp. 123-124).

Vehicles of all kinds, including motor cars, lorries and railway trucks in transit for Cuba, coming from Florida or from other States, which must necessarily pass through Florida, must be sprayed with an insecticide at the last port of departure for Cuba, such treatment to be attested by a certificate issued by an authorized officer of the Department of Agriculture of the United States of America or of the State Plant Board of Florida. This certificate will contain the following indications :— type of insecticide used, specifying its constituents ; the number and initials of each vehicle. Such treatment is not required for the interior of vehicles coming from other States when they are hermetically sealed and have not been opened during

(1) Communication from the official correspondent of the Institute, Mr. J. C. F. HOPKINS, B. Sc., Chief Botanist and Mycologist, Department of Agriculture, Salisbury, Southern Rhodesia.

their stay in Florida, which must be attested by the seals and by indications to that effect on the certificate referred to above.

The sworn declaration required of passengers coming from Florida before the Customs inspectors will be replaced by a written declaration made by passengers during their voyage in the presence of the supercargo of the ship.

By the present Decree the Minister of Agriculture, Commerce and Works has the right to extend the prohibitory measures in force for the importation of all fresh fruits, vegetables, plants and other products coming from Florida to any other State of the United States of America which shall be known to be infected with the Mediterranean fruit fly (' mosca del Mediterráneo ', *Ceratitis capitata* Wied.). (*Revista de Agricultura, Comercio y Trabajo*, Publicación mensual, órgano oficial de la Secretaría de Agricultura, Comercio y Trabajo, Habana, Cuba, julio de 1929, año XII, vol. II, núm. 1, págs. 40 y 41).

Spain. — By " Real orden " No. 357 of 13 September 1929 the importation into the Spanish Territories in the Gulf of Guinea is prohibited of : —

(1) Branches, suckers, roots, etc., intended for the propagation of the banana of any variety ;

(2) (*a*) Any sort of living plant or living plant parts, whether branches, suckers, whole plants, shoots, seeds, roots, tubers, bulbs, rhizomes, leaves, etc., which are diseased or infested with insects or parasites known to be harmful ;

(*b*) Living insects injurious to plants ; also eggs, larvae, chrysalides and pupae of insects ;

(*c*) Cultures of bacteria and fungi injurious to plants ;

(*d*) Soil, etc. ;

(*e*) Any sort of packing material or receptable which has served for the transport of the articles specified above.

(3) The plants or plant parts to which the preceding paragraph refers may be imported by the port of Santa Isabel de Fernando Poo, accompanied by a certificate of origin and a certificate issued by the Agronomical Laboratory of the place of provenance, to the effect that the imported plants are free from all disease ;

(4) The Governor General may require a further inspection of the imported plants at the Agronomic Laboratory, and should the plants not fulfil the required conditions they will be destroyed without any compensation being payable ; the Governor will, moreover, impose a fine on the consigner of from 1000 to 10,000 pesetas. (*Gaceta de Madrid*, Madrid, 19 septiembre 1929, año CCLXVIII, tomo III, núm. 262, págs. 1834 y 1835).

New Zealand. — By special order made by the Green Island Borough Council on the 9 July 1929 and published by the Minister of Agriculture (Notice No. Ag. 2842) on the 6 August 1929, all the plants mentioned in the Second Schedule of the Noxious Weeds Act, 1928, have been declared noxious weeds within the jurisdiction of the Green Island Borough Council. (*The New Zealand Gazette*, Wellington, August 8, 1929, Numb. 55, p. 2035).

*** By special order made by the Picton Borough Council on the 11 July 1929 and published by the Minister of Agriculture (Notice No. Ag. 2845) on the 15 August 1929, the following plants have been declared noxious weeds within the Borough of Picton :— Broom (*Cytisus scoparius*), Fennel (*Foeniculum vulgare*), and St. John's Wort (*Hypericum perforatum* or *H. humifusum*). (*Ibid.*, August 22, 1929, Numb. 58, p. 2154).

Southern Rhodesia. — By Government Notice No. 440 of the 26th July 1929, the importation into Southern Rhodesia is prohibited of maize seed (*Zea Mays*) from India, the Philippine Islands and the Dutch East Indies, or from any other country in which *Sclerospora* diseases of maize may be found to occur. Elm seeds and plants, including all species of *Ulmus* from Europe or from any other country where the elm disease (*Graphium Ulmi*) is known to exist, are also prohibited, as well as chestnut seeds and plants, including all species of *Castanea* from North America or any other country where the disease known as chestnut blight (*Endothia parasitica*) occurs. The importation into Southern Rhodesia of tea seeds from India, Japan and Formosa is now prohibited, except under the authority of a special permit issued at the discretion of the Secretary, Department of Agriculture. Such consignments must be accompanied by a certificate, signed by a scientific officer of the Indian Tea Association, the Imperial Department of Agriculture of India or of the Department of Agriculture, Japan, certifying that the disease known as blister blight (*Exobasidium vexans*) does not exist or has not occurred within a radius of ten miles of the estate or garden on which the seeds were produced. (*The Rhodesia Agricultural Journal*, Issued by authority of the Minister of Agriculture and Lands, Salisbury, Rhodesia, 1929, Vol. XXVI, No. 9, p. 873).

Spanish Territories in the Gulf of Guinea. — See Spain.

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[Deals with the following parasites of various scale insects: *Cybocephalus seminulum* Baudi, *C. flaviceps* Reitter, *Coccinella* (*Thea*) *thuriferae* Sic., *Chilocorus bipustulatus* L., *Exochomus anchorifer* All., *E. pubescens* Kust., *Novius* (*Macronovius*) *cardinalis* Muls., *N. cruentatus* Muls., *Hyperaspis* (*Oxynichus*) *guttulatus* Fairm., *Scymnus kiesenwetteri* Muls., *Pharoscymnus setulosus* Muls., *Ph. anchorago* Fairm., *Cryptolaemus montrouzieri* Muls., *Aphelinus chrysomphali* Mercet, *A. longiclavae* Mercet, *A. diaspidis* How., *A. maculicornis* Masi, *A. mytilaspidis* Baron, *Aspidiotiphagus citrinus* How., *A. lounsburyi* Berl. et Paoli, *Prospaliella leucaspidis* Mercet, *Prospaltella* sp., *Hispaniella lauri* Mercet, *Coccophagus scutellaris* Dalman, *C. lunatus*

How., *C. niger* Masi, *Encyrtus lunatus* Dalman, *Chiloneurus tormosus* Bohm., *Chiloneurinus microphagus* Mayr., *Blastothix ilicicola* Mercet, *Metaphycus hirtipennis* Mercet, *Habrolepis dalmani* Westw., *Aphycus* sp., *Euphycus asterolecani* Mercet, *Anthemus* sp., *Trichomastus* sp., *Signiphora merceti* Malen., *Dicopus citri* Mercet, *Allaptus aurantii* Mercet, *Tetrastichus* sp., *Enargopelte nigra* Mercet, *Scutellista cyanea* Motch, *Pachyneuron* sp., *Erastria* (*Coccidiphaga*) *scitula* Rbr., *Eublemna deserta* Styr., *Eublemna virginalis* Obth., *Cryptochaetum grandicorne* Rond., *Megalomus balachowskyi* Lest., *Fontenella maroccana* Lest.].

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[" Capim da colonia " = *Paspalum densum* Poir. A description is given in Portuguese of the new sub-species of Curculionidae].

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[Reports an exceptional development of *Lymantria monacha* on the larch in the valley of the Chisone ; some biologic observations on *Sinoxylon muricatum*, in Piedmont ; and damage to grapes caused by *Polychrosis botrana*, *Conchylis ambiguella*, *Botrytis vulgaris* and *Coniothyrium Diplodiella*].

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[Continuation of the *Elenco delle specie di insetti dannosi e loro parassiti ricordati in Italia fino all'anno 1911* of the late Dr. G. LEONARDI, Parts I and II [Portici, 1922 and 1927], Part III [Modena, 1928]. In addition to a list of the 75 Italian periodicals consulted the new publication contains : Parte I : Bibliografia (64 pp.). — Parte II : Elenco [alfabetico] delle specie [d'insetti] dannose (153 pp.). — Appendice alla Parte II : Altri animali dannosi non appartenenti alla Classe Insetti (6 pp.). — Parte III : Elenco dei parassiti degli insetti dannosi (24 pp.). — Indice delle piante ricordate (10 pp.).

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[*Botrytis cinerea* (= *B. vulgaris*), *Septoria Cyclaminis*].

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[*Fusarium* sp., *Colletotrichum curvatum* n. sp. and *Cercospora* sp. on *Crotalaria juncea* ; *Sclerotium Rolfsii* and a disease caused by soil conditions, on *Canavalia ensiformis* ; ' mosaic ', *Cercospora cruenta* Sacc. and *Oidium* sp. on *Vigna Catjang* ; *Uromyces Dolichi* Arthur and ' stem canker ' (of fungal origin) on *Cajanus indicus* ; *Corticium vagum* B et C. and *Cercospora* sp. on *Stizolobium aterrimum*. The new species is described in English].

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[Contains : 1. *Moniliopsis Klebahni*, die Ursache des Umfallens der Koniferenkeimlinge. — 2. *Didymella applanata*, der Erreger der Himbeerrutenkrankheit. — 3. Versuche mit *Sclerotinia tuberosa*, als Schädling der *Anemone nemorosa*. — 4. *Stachybotrys Klebahni*.

[Descriptions are given in German of *M. Klebahni* n. sp. and *S. Klebahni*].

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[According to the A. *Coccus ilicis* should be regarded as the type form of the genus *Coccus*. A description in English of *C. siamensis* n. sp., taken in North Siam on *Quercus semiserrata* Roxb.? is given].

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[*Zonabris silbermanni* Chevrol and *Trichodes x-littera* Chevrol are reported *inter alia* as parasitic on the eggs of *Dociostaurus maroccanus* in Algeria].

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[Deterioration produced by *Acremoniella thermophila* n. sp. which is shortly described in this note].

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[In Polish, with title and summary also in German].

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[A description is given in Portuguese of the new genus and species ; *P. torridus* living on *Jatropha Curcas*].

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[*Schistocerca gregaria*].

DE GRYSE, J. J. The relation of Entomology to Meteorology. (Conference of Empire Meteorologists, 1929. Agricultural Section). 9 pp. [mimeographed text].

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[*Lymantria dispar* L., *Phalera bucephala* L. var. *buccephalina* Stgdr., *Drymonia chaonia* Hbn., *Marumba quercus* Schiff., *Boarmia ilicaria* H. S., *Carcina quercana* F., *Gracilaria* (*Coriscium*) *sulphurella* Haw. var. *auruntiella* Peyer., *Orthacanthacris aegyptia* L., *Chrysomphalus dictyospermi* Morg., *Chaitophorus* sp., *Dryaphis* sp., *Chionaspis lepineyi* Balach., *Kermes vermilio* Planchon, *Xyleborus monographus* F.].

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[*Puccinia graminis*].

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[*Fusarium* sp. on *Lychnis*, particularly *L. chalcedonica*].

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[In English, with title and summary also in Dutch. By reason of the vacuolated bodies found in the stems of tobacco affected with ' mosaic ' and considered of animal nature the A. establishes and describes a new genus *Vacuolarium* with the species *V. iwanowski*].

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[*Ustilago Tritici* (Pers.) Jens.].

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[List of 130 parasitic fungi collected on about 250 different plants. *Uromyces borealis* Liro is reported (on *Rumex arifolius* All.), which seems not to have been observed hitherto in the Alps ; other species are of interest for themselves or on account of the host plant].

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[Clearly illustrated with text figures and coloured plates and including the following parts :— I. Die wichtigsten Unkrautpflanzen der Wieser und Weiden. — II. Bekämpfung der Wiesenunkräuter durch die Nutzungsweise der Wiesen. — III. Düngung der Wiesen].

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ficially, but they have not yet been definitely identified. It seems possible that the disease is transmitted by xylophagous insects and perhaps by the tools used in pruning].

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[*Allernaria radicina* Meier, Drechsler et Eddy, observed in the neighbourhood of Florence, reported for the first time in Italy].

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[In Dutch, with summary and conclusions in English].

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NOTES

Second International Vine Growing and Wine Congress (Barcelona, 1929). — The resolutions included the following : — The Congress, recognising that the International Phylloxera Convention of Berne no longer corresponds to the present conditions of the protection of vine growing countries and seriously handicaps its reconstitution, resolves that the said Convention be revised at the next meeting of the International Commission of Plant Diseases and Pests in Rome.

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